

## ABSTRACT OF THE DISCLOSURE

5 An apparatus for controlling motion of an object includes a first actuator for moving the object, an elastic-motion measuring unit for measuring elastic motion of the object, and a control unit for controlling the first actuator based on a result of measurement of the elastic-motion measuring unit. Another apparatus for controlling motion of an object includes a first actuator for moving the object, a second actuator for suppressing elastic motion of the object, and a control unit for controlling the  
10 second actuator based on a result of predicting the elastic motion of the object caused by the first actuator.

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